

# Passenger Automobiles Add 57 Per Cent to Working Efficiency of 6,800,000 Americans

**Fresh Air of Country Homes  
Within Reach of 2,000,000  
Through Gasoline Car Spread**

**Problems of Farm Labor Partly Solved by  
Increase in Auto Production.**

## AUTOMOBILE RAISES EFFICIENCY.

Replies to question cards sent to car owners by the National Automobile Chamber of Commerce show:

37 per cent of car owners improved their living conditions because of automobile.

90 per cent of all cars are used more or less for business.

60 per cent of mileage of average car mileage and 78 per cent of farmer car mileage is for business.

34 per cent of average mileage is instead of trolley or railroad, or where there is no other means of communication.

Average car owner adds 57 per cent to his output through use of automobile, farmer adds 68 per cent to his efficiency.

More than 6,800,000 men added 57 per cent to their productive efficiency during the past year. More than 2,300,000 families have found it possible to live in the suburbs or otherwise improve their home surroundings. A working force equivalent to 1,000,000 laborers is being applied to farming. Such is the creative effectiveness of the passenger car as reported in replies to thousands of cards sent to car owners.

### Questionnaire Sent.

This questionnaire, conducted by the National Automobile Chamber of Commerce, went to automobile license holders taken at random from the registration lists of ten widely diverse States: California, Iowa, Massachusetts, Minnesota, Nebraska, New York, Ohio, Texas, Virginia and Wyoming. The card asked the owner's occupation, the annual mileage, the amount of mileage used for business and for recreation, the amount used to supplement or in lieu of trolley or rail connection. It asked to what extent the passenger car increased the owner's business, and whether it affected his housing problem or living conditions. The present figures are compiled from answers to the first 10,000 cards of this survey which is being further extended until information on the uses of cars by all classes of owners is fully determined.

### Cars Used for Business.

Ninety per cent of the owners reported that they used their cars more or less for business, while 10 per cent stated that their automobiles were for recreation use only. The average increased efficiency of the car owner is 56.7 per cent. A number report but small gain in productivity, but this is heavily overbalanced by the testimony of the farmers who have added nearly 70 per cent to their labor effectiveness, and by the doctors and salesmen, whose business is doubled, tripled, and in some cases quadrupled through use of the car. The use of the passenger car, accordingly, has meant a net gain to industry of 3,000,000 men. There are more than 7,000,000 automobile owners in the country, each increasing his efficiency 56.7 per cent through the use of the car, making an addition to the business productivity of the country in excess of 3,900,000 workers. As there are between 900,000 and 950,000 men manufacturing and selling passenger cars, parts and accessories, there remains a net gain of more than 3,000,000 men. If one were to add the productive efficiency of the 750,000 motor trucks now in use a still greater gain would be shown. The largest gain in productivity

### Railroads Helped.

The railroad and trolley lines which have been handicapped by war conditions are being relieved and supplemented by automobiles. Sixty-two per cent of the car owners report that they use their motor vehicles instead of traveling by rail or electric line. Over one-third of the total automobile mileage is used in this way.

The passenger car has brought increased efficiency in every walk of life. The heaviest users are farmers with physicians and salesmen next in line, contractors, real estate dealers, and insurance men find cars especially useful. Manufacturers and merchants are among the larger classes of automobile owners.

Among the other classes who answered the questionnaire were: Bankers, carpenters, merchants, architects, barbers, teachers, clergymen, wholesalers, artists, undertakers, mail carriers, builders, plumbers, credit men, public accountants, government officials, tobacco brokers, lawyers, hotel men, theatrical men, oil men, superintendents of docks, musicians, miners, railroad executives and others.

**Bankers Grateful.** Forty per cent of the bankers who replied to the question card found the car a help in their business. A Minnesota banker reports that the car has multiplied his business efficiency "ten times." Another writes: "Car use, even on pleasure trips, gives a banker much better understanding of his customers, particularly livestock customers." A third writes of his car's use in business: "I cannot do without it."

In addition to the business use of the car comes much testimony that the owner has had much more opportunity for education, cultural

## COLOR OF GEMS USED FOR CAR

**Sapphire, Garnet and Turquoise Describe Allen Body.**

Color schemes from precious stones now are being used by the Allen Motor Company in developing new shades for the Allen car which is distributed in this city by the Holbrook Auto Corporation, 1320 Fourteenth street northwest. The new colors just announced by the Allen factor are sapphire, garnet, turquoise and amethyst.

The sapphire is a dark blue with narrow white striping; the garnet is a deep maroon lake, with gold striping; the turquoise is greenish-blue, bright and attractive, a color which it is said will not show the dust, yet is not flighty enough to make spots and stains noticeable; the amethyst a bright shade of lavender or heliotrope.

The names of the jewels from which they are taken will be used in describing the new finishings of the Allens.

Things, and healthful recreation through his automobile.

One farmer writes: "It was not for the car we could not have any social life to speak of."

Another says: "Enables me to live nearer better schools, surroundings and still do 50 per cent more business. Couldn't get along without a car."

And a third reports: "I can live in the country with all the advantages of living in town."

## Trucks Equipped with Pneumatic Tires Outnumber Solids---New York Central R. R. Plans to Use Motors

"Predictions made only two or three years ago that in a few years more trucks would go out on pneumatic tires than on solids, seemed a little premature of the time," says H. A. Githens, General Sales Manager of the Federal Rubber Company, "but facts show that in 1920 this prediction has more than been fulfilled. More pneumatic tired trucks are being produced this year than trucks with solid tires."

"In fact," it is the pneumatic tire that has brought vividly to those interested in transportation a picture of the possibilities of the truck. Far-sighted manufacturers are already increasing their production scales, and dealers with vision are making provision to get their share of the increased business.

"The New York Central R. R. is said to be giving serious thought to the question of going into the truck business on a large scale."

"Their plan, while immature, involves such means as the purchasing of fleets of trucks with demountable bodies which could be loaded at the source of freight supply, driven to the railroad tracks where the body would be hoisted on the box car for shipment to its destination, to be loaded there onto another truck chassis."

"The investigation they have conducted is the greatest evidence of the valuable service trucks have given the last few months. In this critical period motor transport actually has kept the wheels of industry moving, when in many cases, at least, plants must have shut down through sheer inability to get materials because of the transportation congestion."

"Another evidence of the growing

realization of the truck's vital place is contained in the announcement of one of the great motor companies of the world for a tremendously increased production of trucks, tractors and agricultural machinery, with especial emphasis on the motorization of the farm.

"The pneumatic truck tire has played, to my mind, as vital a part in the development of the motor truck as the good roads agitation."

### Valve Clearance.

In many of the older car models no means of adjusting the valve clearance is provided. By slipping off or more fibre or metal disks of sufficient thickness to take up the excessive play between the bottom of the valve stem and the push rod this trouble may be obviated.

### Trouble Ahead for Motorist Without Car Title

Motorists who intend to run their cars into Maryland must have their cars titled before Wednesday. The three months of grace is up at that time, and any motorist going into that State after that day is likely to run afoul of the Maryland motor police.

There are heavy fines for those who violate this new law of Maryland, and it is cheaper to fill out the blank and send \$1 to the Commissioner of Motor Vehicles than to take chances.

## SHOWS REVEAL PUBLIC TASTE

**Motor Exhibits Test Out New Ideas in Automobile Making.**

Success in sensing the trend of the times in motor car construction, and in sensing the demands of the motoring public, begins in the great automobile shows, throughout the country, according to Frank B. Ansted, president of the Lexington Motor Co.

He is a believer in the great force of public opinion, and he sees in the big automobile shows rare opportunities to learn the trend of public opinion as it applies to motor car construction.

In these shows are gathered dealers, distributors, and visitors from every part of the world. In the conversation and comments of these visitors at the various display booths Ansted learns what public opinion demands in the way of motor cars.

So each night during show week in any of the large cities which he visits, he may be found walking quietly about, stopping here and there for a word with some show visitor or dealer, getting the judgment of this man or that man on the trend of the times in motor car construction.

Mexico is one of the largest Latin-American customers for automobiles, the 1920 exports of motor vehicles from the United States to Mexico having been exceeded only by those to Cuba, Argentina, and Brazil.

## USE OF MOTOR TRUCK TO SHIP RAW MATERIALS ON INCREASE

Nothing indicates the essential value and importance of motor trucks to the public interest more clearly than the rapidly enlarging field of their application, according to C. B. Stanley, research department, Four Wheel Drive Auto Company. Every day some new function for these transportation aids is discovered, some new field is occupied by trucks because they can do the work better than other means of traffic.

### Use of Trucks Increasing.

"Just now," he said, "it is not difficult to see an increased use of motor trucks for supplying manufacturing plants with raw material and delivering the product to the retail markets. In spite of the somewhat obvious tendency toward centralization of industrial management, there is another tendency toward industrial diffusion in this country. Manufacturing plants are getting nearer to their sources of supply and to their ultimate markets. In doing so they are opening up a

virtually new and extensive field for motor truck operation. "If now we recall the oft-repeated statement that the profitable range of motor truck operation is about 100 miles and couple to it the fact that this range is gradually increasing with better road conditions, we are impressed with the fact that average freight hauling distances and average truck operation range are gradually approaching each other."

### Way Opened for Trucks.

"What must be the result? With increased rates and decreasing distance for freight haulage and increased range and effectiveness of motor truck operation, the way is clearly opening for a great development in the use of motor trucks in connection with the manufacturing industries. They will, to a constantly increasing degree, be called upon to deliver the raw materials to manufacturing plants and to transport their products to the retail or jobbing markets."

## SIMPLEX BATTERY CO. IN NEW HANDS

Preparations have been completed by the Simplex Battery Co., 700 Eighth street, for handling all classes of battery work. The entire business has just been taken over by J. C. Krause. In addition to the sales of new batteries, there

### Care of Universal Joints.

There is no need of filling the universal joints to capacity. This does no harm, but it is a waste of oil and there is a tendency to cause sloppiness over adjacent parts. Filling the joint one-third full produces the best results.

# \$1

# ATTENTION!

# \$1

Our Patrons Have Demanded That We Continue

# OUR GREAT ONE DOLLAR TIRE SALE

A TIRE FOR A DOLLAR

Already thousands of motorists have saved thousands of dollars during this great sale. We've been unable to serve the great numbers that have attended, and so for the benefit of those who have not been able to take advantage of this offer during the time it has already been in progress we have decided to continue it for a short time.

### Genuine Factory Firsts

You will find no old stock, re-treads, cheap "Gyp" tires or seconds offered during this sale. Every tire is a genuine factory first with a written guarantee for 5,000 miles. All are made by the famous

**Lehigh Tire and Rubber Co.**

### A Chance to Save Money

Is what this sale presents. Really the greatest chance you've ever had offered you. But you must not delay, for even though our stock is enormous, it is selling very fast. Remember, you practically get—

**Two Tires for the Price of One**

## HERE ARE THE PRICES---WE PAY THE WAR TAX

Add \$1.00 to These Prices for Two Tires

NO TIRES CHANGED OR MOUNTED DURING SALE	SIZE	PRICE OF ONE	SIZE	PRICE OF ONE	NOT MORE THAN FOUR TIRES TO A CUSTOMER
	30x3	\$19.25	34x4	\$37.60	
	30x3 1/2	22.65	32x4 1/2	46.50	
	32x3 1/2	26.70	33x4 1/2	47.95	
	31x4	31.00	34x4 1/2	49.45	
	32x4	35.15	35x4 1/2	51.60	
	33x4	36.85			

### PROMPT ATTENTION TO MAIL ORDERS

1738  
14th St.  
N. W.



1738  
14th St.  
N. W.

**"IN THE HEART OF THE TIRE DISTRICT"**

## The Motorist Who Doesn't Worry About Sparkplugs Is The One Whose Car Is Equipped With The Sure Spark

**B**ECAUSE "Sure Spark" will fire fouled or broken spark plugs, prevent the formation of carbon and even clean the carbon from the points of the spark plugs. It also causes the spark to be delivered at the points of the spark plugs, which insures a much more perfect combustion. Perfect control of the ignition from the driver's seat without any worry makes driving with a Sure Spark equipped car a pleasure. He can set the unit for starting, city driving, touring or at "clean plugs," which will fire the broken or fouled plug and keep the engine running on every cylinder. You can readily see the great advantage this gives—the ignition is always under complete and simple control and the plugs are always firing EXACTLY right to give the best service.

4-cylinder Unit Now for Sale  
Price—\$10

REFERENCES FURNISHED ON REQUEST

**Sure Spark Ignition Corp.**  
Office Phone, Main 3088  
1512 H St. N. W.  
Factory Phone, Main 1526  
301 13th St. N. W.  
WASHINGTON, D. C.

### AUTHORIZED SERVICE STATIONS

Richter & Miller, 3436 14th St. N. W.  
Burnside & Merchant, 1617 O St. N. W.  
Smith Auto Supply Co., 912 H St. N. E.  
Woodward & Fowler, 2605 M St. N. W.  
Kirby & Sals, 800 9th St. N. E.  
Silver Spring Garage, Silver Spring, Md.  
J. W. Cumberland, 303 13th St. N. W.